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The Significance of Gonorrhoea, occurring in Pregnancy, Labor and the Puerperal State.

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of
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THE SIGNIFICANCE OF GONORRHŒA, OCCURRING IN PREGNANCY, LABOR AND THE PUERPERAL STATE.*

BY PROF. H. FEHLING, OF BASEL, SWITZERLAND.

Under this title Fehling has just lately published an interesting article, of which the following is a brief abstract.

From ten to fifteen per cent. of all marriages are sterile. Glünder holds that in 70.3 per cent. of these cases the sterility is directly or indirectly due to gonorrhœa, and it is probable that large as this number may seem, he has underestimated the effects of this one cause. It is certain that in 50 per cent. of sterile marriages the fault lies with the men, the majority of whom owe their incapacity to aspermism or azoospermism resulting from a gonorrhœal epididymitis. In dealing with gonorrhœa in the man, therefore, this complication should always be remembered, and in connection with the marriage of men who have suffered from this disease, it is well to remember the statement of Wertheim, which is supported by other authorities, that a latent gonorrhœa in the man may infect the woman and she in turn may reinfect the man, who may thus be attacked by a fresh acute gonorrhœa.

A gonorrhœa accompanying pregnancy is not generally confined to the urethra, as has been held by many writers. It is just possible that we may not see patients until the urethritis has been healed, but it is far more probable that observers have been misled by certain symptoms, *e. g.*, painful micturition, which are common to vulvitis and other affections. In non-pregnant women, on the contrary, the process is often confined at first to the urethra. The rare

*Abstracted by Hunter Robb, M. D., Professor of Gynæcology of the Western Reserve University.

Reprinted from The Cleveland Medical Gazette, April, 1896.

cases of urethritis occurring in pregnancy are generally of a benign form and often heal spontaneously. Vulvitis is much more often met with and may be of a very severe grade, especially when the patient is unclean in her habits. Abscesses of Bartholini's glands which occur so often in the gonorrhœa of non-pregnant women is rare in patients who are pregnant. Condylomata acuminata[1] are relatively seldom seen. They are generally small and are found upon the labia, on the folds of the groin or between the nates and seldom in the vagina or upon the cervix. In one case the author amputated a large area of skin covered with these growths under the impression that he was dealing with a carcinomatous process.

Vaginitis is frequent in the gonorrhœa of pregnancy. This statement is much disputed by other investigators. Neisser holds that suppurative gonorrhœal vaginitis is very rare in pregnancy. Fehling holds that the most frequent seat of gonorrhœa in the pregnant woman is the vagina, where it causes a *vaginitis granulosa* or more frequently *vaginitis punctata*, the latter resembling very much the *vaginitis climacterica* in which there occurs exfoliation of the epithelium at the tops of the folds and rugæ of the mucous membrane. The mere presence of gonococci in the vaginal secretion proves nothing unless a definite vaginitis be present, since the cocci may have been derived from the cervix. The thin purulent discharge is generally so profuse that it irritates the external organs.

Erosion of the cervix when it occurs in these cases is generally the result of vaginal or cervical catarrh, which after a time bring about changes not only in the superficial epithelium, but also cause hyperplasia of the connective tissue of the cervix with consequent stiffening and induration which may obstruct delivery.

Cervical gonorrhœa is very often met with. Corporeal endometritis due to the gonococcus is very rare as the infec-

1 Münchener Medicinische Wochenschrift. No. 49. Dec. 1895.

tion usually occurs after conception has taken place. According to Walthard, the gonococci are rendered harmless by the leucocytes in the lower and middle cervical zones, so that the upper cervical (supra-vaginal) zone generally remains free from germs unless they are carried up by instruments or by manipulations in careless hands. Wertheim has demonstrated the presence of gonococci in the secretion in uteri which had been extirpated along with the gonorrhœic adnexa. This gonorrhœal endometritis is mostly of the interstitial form, although glandular changes may take place secondarily. It is possible that such a gonorrhœal endometritis may like syphilis be the cause of abortion in those women who later suffer from chronic inflammatory processes in the adnexa. Gonorrhœal metritis may result from a gonorrhœal endometritis, but in these cases it is probable that abortion takes place before the changes occur in the deeper uterine tissues.

Gonorrhœal perimetritis, with or without salpingitis, may be met with during pregnancy. Fehling thinks he has seen many such cases, especially in private practice, after marriages entered upon while the husbands were still suffering from a not entirely cured gonorrhœa. The symptoms resemble those given by Wigand as diagnostic of rheumatism of the uterus, and many of the so-called rheumatic cases are probably of gonorrhœal origin. The symptoms are those of an ordinary perimetritis with painful uterine colic, and a strong disposition to abortion.

Gonorrhœal salpingitis is rare in pregnancy, but a few undoubted cases have been recorded. In this case it must be assumed that the gonococci enter the tube together with or shortly after the spermatozoa and first set up a localized endosalpingitis. As the uterus and tubes grow larger, the organism, should it remain virulent, may succeed in breaking through into the intact portion of the tube. Similarly a periophoöritis and a perisalpingitis may be brought about. These are characterized by a tendency to rapid localization and the walling off by adhesions.

The Treatment in order to be effective must be instituted as soon as possible, and the vulvitis and other of the earlier symptoms should be attacked before the latter complications, such as endometritis, which we cannot combat, have taken place. The presence of intracellular diplococci, which are stained by Gram's method, justifies the diagnosis of gonorrhœa. In cases of latent gonorrhœa in the man, as soon as pregnancy has been demonstrated, all cohabitation should be interdicted.

Hygienic measures, of course, are indicated in all cases, but the institution of the proper local treatment is of the greatest importance. In urethritis the patient should be made to take large quantities of water in order to dilute the urine and wash away the discharge frequently. Salicylate of soda and salol are sometimes very effective. In obstinate cases the insertion into the urethra of small suppositories of iodoform is often followed by gratifying results.

The medicated douches so highly recommended in vulvitis and vaginitis are often of little use, and such treatment indeed, as Kronig and Menge think, may lower the bactericidal powers of the vaginal secretion. It is certain that the fluid does not get to the bottom of all the rugæ, and douches in any form may provoke abortion. Should douches, however, appear necessary at all, it is best to use warm physiological salt solution or a solution of permanganate of potassium. Iodoform powder may be dusted over the mucous membrane, or a solution of nitrate of silver (5-10 *per cent.*) may be applied with a brush. These drugs, however, should be employed not more than twice or three times a week and then only by the physician himself. The pain and discomfort of the vulvitis may be much alleviated by pledgets of absorbent cotton placed between the labia and changed frequently. If these do not afford relief and the irritation be very severe, compresses wetted in lead water may be employed. The eroded cervix may be painted with a solution of nitrate of silver, care being taken not to push the gonococci up into the upper zones of the cervix.

Condylomata Acuminata should be left alone during pregnancy, and not be removed until later on during the puerperium. After an abortion in a case in which gonorrhœal endometritis is present, it is better not to curette, but to resort to applications of cauterizing remedies and to packing.

Gonorrhœal perimetritis and salpingitis are to be treated on general principles. Rest, and *Priessnitz'* poultices may give relief alone, or the addition of suppositories containing morphine or opium may be necessary. Scarifying or leeching of the *portio* often affords great relief in cases accompanied by severe pain.

The conduction of childbirth in the case of a woman suffering from gonorrhœa is about the same as that of a normal labor. In these cases, however, it has been much disputed whether one shall attempt at the beginning through the use of germicides to destroy the gonococci. In those cases which have been treated during the pregnancy, heroic measures are certainly contra-indicated, and we should content ourselves with endeavoring to remove, as far as possible, the secretion collected by the employment of douches of normal salt solution. In acute gonorrhœa, however, an antiseptic douche of sublimate or lysol seems to give satisfactory results. Although these cases are not, as was formerly held, more liable to mixed infection, it is well to make as few internal examinations as possible for fear of carrying the gonococci further up the genital tract.

The changes in the fibro-muscular part of the cervix which follow erosion, render the first period sometimes very long. In this condition, luke-warm douches and baths may help. Occasionally small lateral intra-vaginal incisions in the cervix may be necessary. Marked stiffness and want of a yielding in the tissues of the vagina or vulva may demand incisions or the use of the forceps to assist delivery. Retention of the placenta may perhaps be due sometimes to gonorrhœa and is to be treated on usual principles.

The Child. Immediately after birth, the child's eyes

should be washed, and two or three drops of a two *per cent.* solution of nitrate of silver should be dropped into each eye. This precautionary measure is so important that the midwife should be instructed to carry it out in case the physician is not present at the birth. *Stomatitis Gonorrhoica* in the child is very rare; when it occurs it should be treated with nitrate of silver. Especial care of the mother's nipples is necessary should the child be afflicted in this way.

The frequency with which the gonococcus appears as the causal agent in febrile disturbances accompanying the puerperium is still unsettled, but it is probable that it has generally been somewhat overrated. While, however, Krönig and others believe that in many septic processes, accompanied by symptoms ascribed to the absorption of pathogenic material, these symptoms are caused by the gonococcus. Fritsch stoutly denies any connection between puerperal disease and gonorrhœa. Only those cases should be diagnosed as due to the presence of the gonococcus in which this is the only pathogenic organism found. It is probable that not more than one-fourth of the cases of endometritis occurring during the puerperium are due to the gonococcus, and it must be remembered that the mere presence of gonococci in the uterine cavity does not mean that the patient must have fever.

The usual treatment of gonorrhœal resorption fever and endometritis consists in vaginal and possibly uterine douches. After four weeks, cauterization of the cervico-uterine cavity may be necessary as in chronic endometritis.

Salpingitis and perisalpingitis are rarer than endometritis. The author has seen four cases of undoubted gonorrhœal origin in the course of several years. Zweifel has seen about the same number. It is possible that in these cases the cocci were in the tube at the time of labor, probably more or less localized and encapsulated, and that during labor, owing to rupture of the enclosing wall of adhesions, some of those cocci succeeded in entering the other portion of the tube or were even poured out over the peritoneum.

Gonorrhœal salpingitis or perisalpingitis in the puerperium, as it has been observed in women in whom gonorrhœa has been demonstrated, appears as a sudden outbreak of a circumscribed pelveo-peritonitis and begins from the third to the tenth day after labor. The temperature is as a rule not very high, though the pulse is rapid. There is tenderness of the abdomen, which is most marked in the region of the tubes. The process is generally confined to one side. Though it is characterized especially by its tendency to be localized, the focus being rapidly walled off from the general peritoneal cavity, it is liable to recur on the slightest provocation. Careless and rough examinations are responsible for a great many exacerbations. The treatment is that of an ordinary perimetritis.

Ovarian Abscesses may be produced by gonococci which have wandered into the ovary through the tube or which have passed directly through the parametrial tissues from the cervix. Such abscesses are rare and are liable to become rapidly infected with the bacterium coli or the streptococcus. In operating on them, therefore, this fact should be borne in mind. The presence in the peritoneal cavity of gonococci alone, no other pathogenic organisms being present, is not of very grave importance, as the peritonitis called forth by them does not tend to become generalized. In removing tubes, which are filled with gonococcic pus, it is unnecessary to employ drainage even should some of it get into the peritoneal cavity. Wertheim has never in such cases been able to find streptococci or staphylococci, along with the gonococci. In some cases he found gonococci alone, in other cases he found other organisms, but never in conjunction with the gonococci.

The occurrence of gonorrhœal mastitis is doubtful; the presence of gonococci in breast abscesses has never yet been satisfactorily demonstrated.